



**DESIGN & CONSTRUCTION GROUP  
THE GOVERNOR NELSON A. ROCKEFELLER  
EMPIRE STATE PLAZA  
ALBANY, NY 12242**

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**ADDENDUM NO. 1 TO PROJECT NO. 47338**

**CONSTRUCTION WORK  
PROVIDE FACILITY STORAGE BUILDING  
ST. ALBANS VETERANS HOME  
17850 LINDEN BOULEVARD  
JAMAICA, NY**

April 18, 2024

**NOTE:** This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

**GENERAL REQUIREMENTS**

1. DOCUMENT 012300 ALTERNATES: Discard the Document bound in the Project Manual and substitute the accompanying Document (pages 012300 – 1) noted “ADDENDUM #1”.

**SPECIFICATIONS**

2. DOCUMENT 133419 PREENGINEERED METAL BUILDING: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 133419 – 1 thru 133419 – 18) noted “ADDENDUM #1” .

**DRAWINGS**

3. Revised Drawings:
  - a. Drawing Nos. A-400 and A-400A noted, “ADDENDUM #1 4/16/2024” accompany this Addendum and supersede the same numbered originally issued drawings.

**END OF ADDENDUM**

Brady Sherlock, P.E.  
Director, Division of Design  
Design & Construction

**SECTION 012300**

**ALTERNATES**

**PART 1 GENERAL**

**1.01 DESCRIPTION**

- A. This Section describes the changes to be made under each alternate.
- B. Coordinate pertinent related Work and modify surrounding Work as required to complete the project under each alternate selected by the Director.
- C. Include in the Base Bid the cost of all Work required by the Contract Documents except the additional cost (if any) of the alternates described below.

**1.02 DESCRIPTION OF ALTERNATES**

- A. Construction Work:
  - 1. Add Alternate No. 1: Mezzanine construction, foundation, lighting, emergency lighting, HVAC, fire alarm, outlets, and fire protection.

**PART 2 PRODUCTS (Not Used)**

**PART 3 EXECUTION (Not Used)**

**END OF SECTION**

**SECTION 133419**

**PRE-ENGINEERED METAL BUILDING**

**PART 1 GENERAL**

**1.01 PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION**

- A. Anchor Bolts and Tie Rods: Installed under the work of Section 033000.
- B. Embedded Sill Members: Installed under the work of Section 033000.

**1.02 RELATED WORK SPECIFIED ELSEWHERE**

- A. Concrete Formwork: Section 031100.
- B. Concrete Reinforcement: Section 032100.
- C. Cast-In-Place Concrete: Section 033000.
- D. Drainage Pipe (from downspouts): Section 334103.
- E. Rolling Service Doors: Section 083323.
- F. Finish Hardware: Section 087100.
- G. Glass and Glazing for Doors: Section 088100.
- H. Construction Painting: Section 099101.

**1.03 REFERENCES**

- A. Reference Standards: Comply with the following as applicable:
  - 1. Design, Fabrication and Erection: "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings" and the "Code of Standard Practice For Steel Buildings and Bridges" by the American Institute of Steel Construction (AISC Specification and Code).
  - 2. Design and Fabrication of Cold-formed Steel Structural Members: "Specification for the Design of Cold-Formed Steel Structural Members" by the American Iron and Steel Institute (AISI Specification).
  - 3. Welding: Comply with the provisions of the "Structural Welding Code - Steel, AWS D1.1" or the "Structural Welding Code - Sheet Steel, AWS D1.3", by the American Welding Society (AWS Codes).
  - 4. High-Strength Bolting: Provide high strength bolting in accordance with the "Specification for Structural Joints Using ASTM A325 or A490 Bolts" approved by the Research Council on Riveted and Bolted Structural Joints of the Engineering Foundation on August 14, 1980 except as follows:
    - a. Item 1(c): Wind connections and all other connections transferring moment shall be included among the connections limited to friction-type.

- b. Item 5(b): All high strength bolts shall have a hardened washer under the element (nut or bolt head) turned in tightening, regardless of the method of tightening.
  - c. Item 6: The inspection of bolt tightening shall be as specified under Item 6(d). Furnish the calibration device and the inspection torque wrench, and make them available, upon request, to representatives of the State or designated inspection laboratory during the entire period when steel is being fabricated and erected. The inspection torque wrench shall be capable of indicating that the job inspecting torque has been reached by a second method in addition to direct observation of the wrench dial. The inspection wrench calibration and the bolt tightening inspection shall be performed by the Contractor, and shall be witnessed by a representative of the Director or the designated inspection laboratory.
- 5. Pedestrian Doors and Frames: Comply with applicable requirements of Steel Door Institute's "Recommended Specifications for Standard Steel Doors and Frames" (SDI-100).
  - 6. Clevises, Turnbuckles, and Sleeve Nuts: Comply with the "Steel Construction Manual" by The American Institute of Steel Construction (AISC Manual).
  - 7. Gages:
    - a. Sheet Steel: U.S. Standard.
    - b. Steel Wire: U.S. Steel Wire Gage.

#### 1.04 DESIGN REQUIREMENTS

- A. Design Criteria: Except as shown or specified otherwise, building design shall conform to the Metal Building Manufacturers Association's (MBMA) "Design Practices" and "Code of Standard Practice", and with the following criteria:
  - 1. Wind Loading: 30.33 lb/sq ft, minimum, on the vertical building projection.
  - 2. Roof Snow Loading: 20.00 lb/sq ft, minimum, on the horizontal projection of the building roof.
  - 3. Wind Uplift Loading: 30.33 lb/sq ft, minimum, on the horizontal projection of the building roof.
  - 4. Design load reductions based on tributary loaded area shall not be used.
  - 5. Roof System Uplift Rating: UL Class 90 wind uplift resistance rating.
  - 6. Exterior Wall and Roof System Deflection: Withstand imposed loads with maximum span deflection of L/120.
  - 7. Building Size: Not less than the size indicated on the Drawings.
    - a. Actual building length shall be to the inside face of exterior end wall panels and shall be equal to the nominal building length.
    - b. Actual building width shall be to the inside face of exterior side wall panels and shall be equal to the nominal building width.
  - 8. Grounding: Building shall be grounded.

#### 1.05 SUBMITTALS

- A. Shop Drawings: Drawings shall show specific application to this Project. Submit all required drawings in one submission, except as noted.

## ADDENDUM #1

1. Erection Drawings: Manufacturer's complete erection drawings. Indicate manufacturer's identification marking for the components.
2. Structural Drawings:
  - a. Manufacturer's drawings showing base plate dimensions and foundation loads for all columns and/or rigid frames.
  - b. Manufacturer's drawings showing anchoring details for the sill members, door jambs, and other miscellaneous items requiring connections to the concrete foundation.
  - c. Manufacturer's details for any proposed wall wind bracing system other than portal columns as shown.
  - d. Foundation drawings showing dimensions and elevations of all piers, walls, and footings required.
  - e. Anchor bolt plan showing the location of all columns and/or rigid frames, and the location of all necessary anchor bolts or other main framing connections to the concrete foundation.
  - f. Anchor bolt and tie rod details.

**Note:** Drawings required under 2.d., 2.e., and 2.f. shall not be submitted until the manufacturer's drawings required under 2.a., 2.b., and 2.c. have been approved.

**Note:** Manufacturer's standard sheets showing loads or details for a multiple range of building spans, heights, and loadings will not be accepted.

3. Architectural Drawings: Architectural detail drawings for all auxiliary building components and accessories.
- B. Submit an Environmental Product Declaration (EPD) from the manufacturer for steel within this specification section, if available. A statement of the contractor's good faith effort to obtain the EPD shall be provided if not available.
1. Manufacturer-provided EPDs must be Product Specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services*.
- C. Product Data: Manufacturer's catalog sheets, specifications and installation instructions for the following:
1. Roofing panels.
  2. Exterior wall panels.
  3. Interior liner panels.
  4. Doors.
  5. Windows.
  6. Louvers.
  7. Ventilators.
  8. Trim, exterior and interior.
  9. Flashings.
  10. Insulation.
  11. Sealants and gaskets.
- D. Samples:

1. Twelve inch square corner sections:
    - a. Roofing panel.
    - b. Exterior wall panel.
    - c. Interior liner panel.
    - d. Roof and wall insulation.
  2. Color Samples: Manufacturer's standard colors for exterior wall and roofing panels, trim, and other factory color-coated components.
    - a. Standard colors for translucent light panels.
- E. Quality Control Submittals:
1. Design Calculations: Manufacturer's design calculations, signed and sealed by a licensed Professional Engineer, for the structural framing and exterior wall and roofing panels.
    - a. The Engineer's cover letter shall state that he or she has received a set of the Contract Drawings and Specifications and that the design calculations are based on the requirements of the Contract Drawings and Specifications.
  2. Certificates: Metal building manufacturer's written certification that the structure has been designed in conformance to the specified design loading and other design requirements. Note: This is a pre-award submittal; refer to Supplementary Instructions to Bidders - Condition of Award.
- F. Contract Closeout Submittals:
1. Warranties:
    - a. Roofing Panels: Metal building manufacturer's 20 year warranty on roofing panels and related trim against rupture, structural failure, or perforation due to atmospheric corrosion.
    - b. Exterior Wall Panels: Metal building manufacturer's 25 year warranty for factory applied color finish on exterior surfaces of exterior wall panels and related trim against blistering, peeling, cracking, flaking, checking, chipping, color change exceeding 5 N.B.S. units (per ASTM D-2244), and chalking exceeding a rating of 8 (per ASTM D-659).

## 1.06 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: The manufacturer of the pre-engineered metal building shall be regularly engaged in the design and fabrication of pre-engineered, pre-fabricated metal buildings, shall have furnished such buildings for five similar projects that have been in use for not less than five years, and shall be subject to the approval of the Director. The building manufacturer shall be capable of furnishing compatible auxiliary building components and accessories shown or specified.
1. If requested, furnish to the Director the names and addresses of five similar projects where the manufacturer's building has been in use for five years.
- B. Installer's Qualifications: The person supervising the installation of the work of this Section shall be experienced in pre-engineered metal building work, and shall have been regularly employed by a company engaged in the erection and installation of such buildings for a minimum of three years.

## ADDENDUM #1

1. If requested, furnish to the Director the names and addresses of three similar projects for which the supervisor has supervised the erection and installation of pre-engineered metal buildings.
- C. Regulatory Requirements:
  1. Code: Comply with the applicable provisions of the New York State Uniform Fire Prevention and Building Code.
  2. Column Fire Rating: Comply with the applicable specifications and details of Underwriters Laboratories, Inc.
  3. Building Grounding: Comply with National Electrical Code.
- D. Inspection: Quality assurance inspection may be made by the State. If quality assurance inspection is made by the State, it shall not relieve the fabricator or erector of responsibility for their own quality control program.

### 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver building components, except structural steel, to the Site in unopened cartons, crates, or other protective containers bearing the manufacturer's labels.
- B. Components shall have manufacturer's identification marking corresponding to the marking shown on the erection drawings.
- C. Keep materials dry while in storage.
- D. Handle materials by a method which will prevent damage to components, including finishes.

## PART 2 PRODUCTS

### 2.01 PRE-ENGINEERED METAL BUILDING MANUFACTURERS

- A. Acceptable Manufacturers:
  1. Varco Pruden Buildings, 3200 Players Club Circle, Memphis, TN 38125, (901) 748-8000, [www.vp.com](http://www.vp.com). **(Basis of Design)**
  2. Butler Manufacturing, 1540 Genessee St., Kansas City, MO 64102, (877) 694-8722, [www.butlermfg.com](http://www.butlermfg.com).
  3. Nucor Building Systems, 200 Whetstone Road, Swansea, SC 29160, (803) 568-2100, [www.nucorbuildingsystems.com](http://www.nucorbuildingsystems.com).

### 2.02 MATERIALS

- A. Basic Materials: Except as otherwise specified or indicated on the Drawings, building components and assemblies shall be fabricated from the following applicable materials as required to produce units conforming to the design and types of fabrications required for the building.
  1. Structural Steel Members: ASTM A36, A529 or A572 except as otherwise indicated.
  2. Cold-Rolled Structural Steel: ASTM A446, Grade A except higher strength grade if needed to comply with design criteria.

3. Cold-Formed Structural Steel: ASTM A570.
  4. Structural Steel Tubing: ASTM A500, Grade B or A501.
  5. Steel Plate and Bar Stock: ASTM A529 or A572.
  6. Steel Pipe: ASTM A53, type and weight as required, Grade B.
  7. Anchor Bolts and Tie Rods: ASTM A36 or A675, Grade 70.
  8. Clevises, Turnbuckles, and Sleeve Nuts: Similar to those shown in Part 4 of the AISC Manual. The safe working loads shall be adequate for the building furnished.
  9. High Strength Bolts: ASTM A325.
  10. Common (Standard) Bolts: ASTM A307.
  11. Steel for Shims and Fillers: ASTM A569.
  12. Welding Materials: AWS Codes, type required for materials being welded.
  13. Covering Fasteners:
    - a. Screw Bolts: Type 300 series stainless steel capped low profile head, 200 inch lb min stripping tongue, color finish on exposed exterior surfaces matching adjacent panels/trim.
    - b. Sheet Metal Screws: Type 300 series stainless steel or ASTM A165 cadmium plated case hardened carbon steel, self-drilling or self-tapping, standard hexagonal head or hex-washer head, color finish on exposed exterior surfaces matching adjacent panels/trim.
    - c. Rivets: Aluminum, pull type, self-petalling, 1400 lb setting strength, 1650 lb shear strength, 350 lb min push out strength, color cap on exposed exterior surface matching adjacent panels/trim.
    - d. Sealing Washers: Neoprene washers, ASTM D735.
  14. Shop Primer Paint for Framing: Equal performance requirements of FS TT-P-636 or TT-P-664.
  15. Cold Galvanizing Compound: Single component compound giving 93 percent pure zinc in the dried film, and complying with DOD-P-21035A (NAVY).
  16. Bituminous Paint: Asphaltic type, SSPC - Paint 12.
  17. Bedding Mortar:
    - a. Cement Grout: Portland cement complying with ASTM C150, Type I or III, and clean uniformly graded natural sand complying with ASTM C404, size No. 2; mixed at a ratio (by volume) of 1.0 part cement to 3.0 parts sand, with only the minimum amount of water required for placement and hydration.
    - b. Shrink-Resistant Grout: Factory-packaged, shrink-resistant, non-staining, non-ferrous mortar grouting compound selected from the following:
      - 1) Masterflow 713 by Master Builders.
      - 2) SonogROUT by Sonneborn.
      - 3) Five Star Grout by U.S. Grout Corporation.
      - 4) Crystex by L&M Construction Chemicals.
      - 5) Non-Corrosive, Non-Shrink Grout by A.C. Horn.
- B. Assembly and Installation Accessories: Building manufacturer's standard reinforcements, extensions, clips, brackets, miscellaneous fasteners and anchoring devices, spacers, furring strips, closures, flashings, expansion joints,



thermal breaks, adhesives, and other components needed for a complete, permanently weatherproof installation. Materials shall be non-deteriorating, corrosion resistant, and compatible with adjoining materials.

- C. Connections: Fasteners shall be of size and in quantities to securely and permanently join building components, and shall be complete with necessary hardware and accessories as required for the application. Connections shall allow for expansion and contraction in accordance with the approved design. Screw bolts and rivets shall have metal-backed sealing washers. Except as otherwise indicated, provide the following fastener types for the following locations:
1. Roofing Panels to Structural Members: Screw bolts or rivets.
  2. Wall Panels to Structural Members: Screw bolts or standard bolted connection.
  3. Wall Panels to Wall Panels: Screw bolts, sheet metal screws or rivets.
  4. Interior Liner Panels to Supports: Cadmium plated steel fasteners of required type for secure attachment.
  5. Trim: Same fasteners as adjacent panels.
- D. Sealants, Gaskets and Closures:
1. Tape Sealant: Flat shaped, elastomeric, non-hardening, ribbon sealant; type recommended by building manufacturer for the particular use and conditions of application.
  2. Tube or Pumpable Sealant: Polybutenebutyl or acrylic terpolymer base sealant, or other type sealant recommended by building manufacturer for the particular use and conditions of application.
  3. Gaskets: Rubber, building manufacture's standard shapes.
  4. Closures: Closed cell foam or rubber material, formed to match panel profiles, sized to provide weathertightness.
- E. Galvanizing: Complying with the following requirements except where otherwise specified.
1. Formed Sheet Steel: ASTM A653, coating designation G-90.
  2. Assembled Steel Products: ASTM A123.
  3. Iron and Steel Hardware: ASTM A153.
  4. Products Fabricated From Rolled, Pressed and Forged Steel Shapes, Plates, Bars and Strip: ASTM A123.
- F. Color Finish: Factory applied color finish system on exposed surfaces of steel components specified to receive color finish, complying with the following requirements:
1. Surface Preparation: Galvanized steel shall be given a chemical conversion treatment conforming to Federal Government Specification MIL-C-490A, Type 1, Grade 1.
  2. Coating: After conversion treatment, metal shall be precision coated with thermosetting polymerized enamel to a dry film of one mil, plus or minus 0.2 mil, over the entire material width prior to forming of panels.
  3. Finish Pigmentation: Inorganic pigments selected for maximum durability and resistance to fading, except do not use aluminum pigment.

4. Finish Gloss: Evenly maintained over the entire surface at 30, plus or minus 5 units, as measured on a 60 degrees Gardner photovolt meter for appearance, balance, reflectivity and durability.
5. Colors: As selected by the Director from building manufacturer's standard colors.

### 2.03 PRIMARY BUILDING FRAMING

- A. Columns, roof beams, trusses, and rigid frames shall be factory fabricated, with required holes in webs and flanges accurately punched or drilled unless otherwise indicated or approved. Enlarging or gouging holes at the site will not be permitted. Base plates, splice plates, stiffener plates, and other required plates shall be shop fabricated and welded in place where applicable.
- B. Rigid Frames: Clear span, solid web framing, tapered or uniform depth, welded-up plate section columns and beams.
  1. Rigid Frame Tie Rods and Anchor Bolts:
    - a. Tie rods shall be round bars, of constant diameter or with integral upset ends.
    - b. The allowable tensile stress on the unthreaded body area of tie rods, and on the tensile stress area of anchor bolt and tie rod threads shall be 22,000 psi.
    - c. Tie rods shall not be spliced by welding.
- C. Trusses: Open web framing; hot rolled sections, cold formed shapes, or built-up shapes of welded plate construction.
- D. Endwall Framing: Corner posts, endposts and rake beams; hot rolled sections, cold formed shapes, or built-up shapes of welded plate construction.
- E. Bracing: Wind bracing and struts, flange and knee bracing, sag rods, and other bracing and support members as required by the building design; steel angles and rods recommended by building manufacturer unless otherwise indicated.
- F. Bolts for Field Assembly of Primary Building Framing and Bracing: High strength bolts.
- G. Shop Painting: Comply with the following requirements except where otherwise specified:
  1. Steel framing shall be thoroughly cleaned of loose mill scale, loose rust, weld slag, and other foreign material. Oil and grease shall be removed with solvent.
    - a. Galvanized items shall be rinsed in hot alkali or in an acid solution and then in clear water. Welded and abraded galvanized surfaces shall be repaired with a 2 mil thick coating of cold galvanizing compound applied in accordance with compound manufacturer's instructions.
  2. One coat of primer paint shall be applied to all steel surfaces except surfaces to be welded and contact surfaces of high strength bolted connections.

## 2.04 SECONDARY BUILDING FRAMING

- A. Purlins: Cold formed steel shapes, or cold formed open web welded trusses.
- B. Girts: Cold formed steel shapes.
- C. Eave Members: Cold formed steel shapes.
- D. Sill Members: Roll formed galvanized steel base angle (or zee), or galvanized steel base tube with anchors.
- E. Overhead Door Frames: Frames shall be fabricated from structural shapes and bars as required to receive overhead doors, with corners fully welded and ground smooth, and with provisions for bracing to building framing. Exterior frames shall be galvanized after fabrication.
- F. Framing for Miscellaneous Openings: All openings shall be framed for proper support and attachment. Frames shall be fabricated from structural shapes and bars with corners fully welded and ground smooth, and with provisions for bracing to building framing. Exterior frames shall be galvanized after fabrication.
- G. Shop Painting: Comply with the requirements specified for Primary Building Framing.

## 2.05 ROOFING PANELS

- A. General:
  - 1. Roofing panels shall include all related components and accessories necessary for a complete roof system.
  - 2. Metal sheets shall be prefinished (coil coated) to the greatest extent possible prior to forming and panel fabrication.
  - 3. Panels shall be fabricated in maximum lengths possible as necessary to minimize end laps.
- B. Roof Panels: "SSR" Standing Seam Roof Panels; 24 inches wide net coverage, with 3 inches high major ribs formed at the panel side laps, formed for field seaming using electrically operated seaming machine.
  - 1. Side joints: Factory applied sealant.
  - 2. Material (Painted): AZ50 Galvalume coated steel.
  - 3. Thickness: 24 gage (0.58 mm).
  - 4. Standard Roof pitches ranges from 1/4 inch:12 up to 4 inches:12
  - 5. Side laps: Two factory-formed interlocking ribs, with one weather sealed joint, field-seamed into place to form a double-fold 360 degree seam.
  - 6. Length: Continuous from eave to ridge up to 55 feet in length.
  - 7. End laps, where required: 4 inches wide, located at a support member.
  - 8. Panel-to-roof purlin structural attachments: SSR clips with movable tabs which interlock with seamed SSR panel ribs and provide for 1-5/8 inches (41 mm) of panel movement in either direction from center of clip to compensate for thermal effects.
  - 9. SSR Ridge; draw-formed aluminum seam caps factory-attached to SSR

- ridge panels that are seamed together along the center of the ridge, utilizing only one weather sealed joint and providing a true expansion joint for panel movement.
10. Rake edge of roof shall be attached to the building structure in a manner which will allow thermal expansion of the SSR roof panels along the gables and will provide the uplift resistance required by code.
  11. SSR roof will meet the requirements for UL Class 90 wind uplift and FM Class 1-60, 1-75, 1-90 and 1-120. Certification includes IAS.
  12. The KXL paint system is a PVDF finish applied to the zinc aluminum coated steel to give a long life color that resists fading and chalking. KXL is a 1 mil nom. PVDF finish with 70 percent Kynar 500 or Hylar 5000 standard.
  13. Exposed fasteners are stainless steel capped painted to match roof color.
  14. SSR roof will meet the requirements for UL Class 60 or 90 wind uplift. Certification includes IAS and Miami-Dade County Florida product approval. FM Class 1 Roof Assembly, Class A Fire classification (ASTM E 108).
- F. Roof System Trim, Flashing, and Accessories: Materials shall be the same materials used for the panels, unless otherwise indicated or required by the application. Configurations shall be the standard with the building manufacturer for the specified roofing panels, unless otherwise indicated. Coatings and finishes shall match roofing panels, except building manufacturer's standard finishes (as required by application) may be furnished on special use accessories.
1. Roof Penetration Flashings:
    - a. Pipe Flashing: Pleated, one-piece, ethylene propylene diene monomer rubber units with aluminum alloy reinforcing ring bonded to base flange, sized for pipe diameter.

## 2.06 MANUFACTURED ROOF INSULATION SYSTEM

- A. Roof Insulation System: "ThermoDeck" roof insulation system.
- B. System Components:
  1. Metal Roof System: "SSR" metal roof system.
  2. Sub- Structural System:
    - a. 3-inch nominal zee-shaped members (nominal 0.060-inch-thick, acrylic-coated, galvanized steel), factory punched for specific roof system being installed.
    - b. Support Brackets:
      - a) 3-inch, 5-inch, or 8-inch height support zee and provide space for various thicknesses of insulation.
      - b) Install with self-drilling fasteners through interior liner panel and into building structure.
      - c) Attach zees to support brackets with self-drilling fasteners.
  3. "DeckLiner" Interior Liner Panels:
    - a. Form from 0.0149 – inch minimum total coated thickness coated steel with minimum yield strength of 80,000 psi.
    - b. Nominal 36-inch-wide panel with corrugations 1/2 inch high, 3 inches on center.

- c. Factory cut to required length.
- d. Unpainted Liner Panels: Galvalume aluminum-zinc alloy coated steel, AZ55 in accordance with ASTM A 792
- 4. Vapor Retarder:
  - a. Liner Panel, Sidelaps, and Endlaps: Seal with "Panlastic" sealant to prevent vapor transmission between sheets.
    - 1) Foam Closure: Use at terminating ends of liner panels to seal corrugations of panels.
  - b. 0.0032-inch minimum thick vinyl facing rolled out over top of liner panels.
    - 1) Perm Rating: 1.0.
  - c. Facing material of vinyl film and metalized substrate laminated to glass fiber scrim reinforcement (VRP) rolled out over top of liner panels.
    - 1) Perm Rating: 0.2.
- 5. Insulation:
  - a. Unfaced Insulation: NAIMA 202.
  - b. Top Layer of Blanket Insulation: 3-inch-thick insulation installed between roof panels and 3-inch zee.
    - 1) Furnish insulation in rolls of 3-foot, 4-foot, 5-foot, or 6-foot width.
    - 2) R-19.
  - c. Bottom Layer of Blanket Insulation: Furnish in rolls of 3-foot, 4-foot, 5-foot, or 6-foot width or 5-foot by 5-foot batts.
    - 1) R-11
  - d. Nominal Thickness: 9 ½ inches.
  - e. Certified R-Value: 30.0
  - f. Roof Assembly U-Factor: 0.035 Btu/hr/sq ft/deg F.
- C. Zee Member: Insulated using 1-inch-nominal-thick extruded polystyrene foam insulation block along each zee location to minimize "thermal short circuit" between zee and roof panels.
- D. Fasteners:
  - 1. Sub-structurals and Liner Panels: Install with self-drilling screws for attachment
  - 2. Roof Attachment Fasteners: As specified under Roof System in this specification section.
- E. Provision for Expansion and Contraction:
  - 1. Provision for Thermal Expansion and Contraction Movement: Accomplish in roof system.
  - 2. As specified under Roof System in this specification section.
- F. Performance Testing: As specified under Roof System in this specification section.

## 2.07 EXTERIOR WALL PANELS

- A. General:
  - 1. Exterior wall panels shall include all related components and accessories necessary for a complete exterior wall system.

2. Metal sheets shall be prefinished (coil coated) to the greatest extent possible prior to forming and panel fabrication.
3. Panels shall be fabricated in one-piece length from sill to roof line, except where panels are interrupted by auxiliary building components such as windows. Upper end of panels shall be fabricated to form a close fit with roof system. Provisions shall be made for a weathertight closure at ends of panels.
  - a. Self-contained insulated units shall be self draining to the exterior.

B. Description:

1. Type: Precision roll formed metal sheet.
2. Type: Self-contained, factory assembled, insulated units.
3. Covering Width: 42 inches.
4. Seam Design (Sidejoint): Double tongue and groove with seals.
5. Cross Section Profile:
  - a. Minor ribs spaced between seams.
  - b. Exterior and interior faces shall be securely fastened to a thermal break joiner, forming a box type section.
6. Panel Thickness: 2 inches.
7. Insulation Thickness: 2 inches.
8. Attachment to Supporting Members: Concealed fasteners.
9. Sidejoint Sealant/Gasket/Seal: Field applied.

C. Materials:

1. Panel Sheet: 26 gage galvanized steel.
2. Panel Sheet: 0.032 inch thick alclad 3003 aluminum, H274 temper.
3. Exterior Facing: 26 gage galvanized steel design is panel factory formed with vertical lines to present an attractive durable finish.
4. Interior Facing: Light Mesa design 26 gage steel, factory coated with white polyester finish.
5. Insulation: Fiberglass batt.
6. Thermal Breaks/Joiners: Building manufacturer's standard thermal non-conductive material.

D. Coatings and Finishes:

1. Front Surface: G90 galvanized coating designation, coated in 70% fluoropolymer finish to provide long term low maintenance performance, and color finish.
2. Back Surface: G90 galvanized coating designation, and panel manufacturer's standard rust-inhibitive back surface finish used with specified front surface color finish.
3. Front and Back Surfaces: Alclad hammered surface.
4. Exterior Facing:
  - a. Front Surface: G90 galvanized coating designation, and color finish.
  - b. Back Surface: G90 galvanized coating designation, and panel manufacturer's standard rust-inhibitive back surface finish used with specified front surface color finish.
5. Interior Facing:

- a. Front Surface: G60 galvanized coating designation, and polyester paint finish.
  - b. Back Surface: G60 galvanized coating designation, and panel manufacturer's standard rust-inhibitive back surface finish used with specified front surface finish.
- E. Panel Insulation Values (Tested at 40 degrees F and 5 year age):
- 1. R Value: R-15 or more.
- F. Exterior Wall System Trim, Flashing, and Accessories: Materials shall be the same materials used for the panels, unless otherwise indicated or required by the application. Configurations shall be the standard with the building manufacturer for the specified wall panels, unless otherwise indicated. Coatings and finishes shall match wall panels, except building manufacturer's standard finishes (as required by application) may be furnished on special use accessories.
- 1. Corner Trim/Assemblies.
  - 2. Opening Trim.
  - 3. Base Angle/Channel/Tube Trim/Flashing.
  - 4. Base Closure.
  - 5. Soffits.
  - 6. Wall Transitions.
  - 7. Expansion Joint Covers.
  - 8. Accent/Shadow Mullions/Battens.
  - 9. Infills.

## 2.08 WALL INSULATION

- A. General:
- 1. Laminated Fiberglass: Owens-Corning Fiberglas, NAIMA 202, "Certified R" metal building insulation.
  - 2. TIMA Insignia and Insulation Thickness: Ink-jet printed on fiberglass.
- B. Wall Insulation:
- 1. Nominal Thickness: 6 inches.
  - 2. Certified R-Value: 19.0.
- C. Wall Insulation Facing: PSK Standard Duty (WMP-10).
- 1. 0.0015-inch-thick, UV-stabilized, white metalized polypropylene laminated to 14-pound Kraft paper, reinforced with glass-fiber scrim.
  - 2. Adhere facing to Owens-Corning Fiberglas "Certified R", NAIMA 202, fiberglass blanket.
  - 3. Assembly of Insulation Blanket and Facing:
    - a. Flame Spread Rating: Less than 25.
    - b. UL Label: Submit as specified in Submittals article of this section.
    - c. Perm Rating: 0.02.
- D. Exterior Wall System Trim, Flashing, and Accessories: Materials shall be the same materials used for the panels, unless otherwise indicated or required by the application. Configurations shall be the standard with the building manufacturer for the specified wall panels, unless otherwise indicated. Coatings and finishes

shall match wall panels, except building manufacturer's standard finishes (as required by application) may be furnished on special use accessories.

## 2.09 INTERIOR LINER PANELS

- A. Description:
1. Type: Roll formed metal sheet.
  2. Height: Continuous from sill to eave up to 43 feet in length.
  3. Cross Section Profile: 36 inch wide net coverage, with 1-3/16 inch high major ribs with minor ribs spaced between the major ribs.
  4. Side laps: Two fully overlapping major ribs secured together with 1/4 inch diameter Stainless Steel capped color-matched carbon steel fasteners.
  5. Provide full height and ceiling liner panels.
- B. Material: 28 gage, AZ50 Galvalume coated steel.
- C. Finish: Cool Cotton White, SMP Silicone-Modified Polyester finish or color as selected by D.R.
- D. Trim:
1. Corner.
  2. Cap.
  3. Base.
  4. Finish – match panel or color as selected by D.R.

## 2.10 WINDOWS

- A. Windows shall be the metal building manufacturer's standard frame and operable sash units fabricated of extruded aluminum sections, complete with glass, hardware, weatherstripping, and insect screens, and complying with applicable sections of Architectural Aluminum Manufacturers Association 302 "Specifications for Aluminum Prime Windows".
1. Type:
    - a. Projected - Commercial P-A2.
  2. Frame Construction: Fabricated to a configuration for self-framing and self-flashing installation in the wall covering system.
  3. Finish: Medium bronze pigmented organic coating conforming to AAMA 603.
  4. Hardware: Manufacturer's standard operating hardware.
  5. Glass: Double strength, "B" quality, clear sheet glass.
  6. Glass: 1/2 inch thick insulating glass units fabricated from 2 sheets of clear sheet glass.
  7. Weatherstripping: Woven pile or flexible vinyl around perimeter of operable sash.
  8. Insect Screens: Minimum 3/4 inch wide extruded or roll-formed aluminum frames; 18 x 14 mesh, .0123 inch diameter, 5056 clad aluminum screen cloth secured in frame with plastic or aluminum splines.
  9. Mullions: Vertical mullion between individual window units, designed to align and weatherseal adjacent windows.



## 2.10 EXTERIOR PEDESTRIAN DOORS, FRAMES AND ACCESSORIES

- A. Doors: SDI-100 Type II, Style 2, 1-3/4 inches thick, 18 gage zinc-coated steel with weather cap.
  - 1. Core Material: Polyurethane foamed-in-place or resin impregnated kraft honeycomb.
  - 2. U Value: 0.30 or less.
  - 3. Glass and Louver Stops: Non-removable steel stops on outside of doors, removable steel stops or beads on inside of doors.
  - 4. Louvers: Weatherproof, 20 gage steel frame, 24 gage blades welded or tenoned to frame.
  
- B. Frames: Welded frame, 16 gauge galvanized (A60), 5-3/4 inch standard frame profile, interlocking corner connection (then welded). Frames meet (SDI) standards. Knock Down frames will not be accepted.
  
- C. Fabrication: Prepare units to receive finish hardware, including cutouts, reinforcing, drilling, and tapping. Reinforce units to receive surface-applied hardware to be field applied.
  
- D. Shop Finish: After fabrication, units shall be cleaned and chemically treated for corrosion resistance and good paint adhesion. Units shall receive manufacturer's standard two coat baked on paint finish.
  - 1. Color: Selected from manufacturer's standard colors.
  
- E. Weatherstripping: Door openings shall be weatherstripped at jambs, head, and sill. Weatherstripped opening shall meet or exceed water and air infiltration standards in Steel Door Institute's SDI-115 and SDI-116 respectively.
  - 1. Sill: Aluminum extrusion with vinyl sweep strip.
  - 2. Jambs and Head: Aluminum extrusion with vinyl bulb.
  
- F. Thresholds: Extruded aluminum with mill finish, notched at ends for door stops, drilled and countersunk for attachment.
  - 1. Size, Profile and Surface Pattern: Building manufacturer's standard units except where otherwise indicated on the Drawings.
  - 2. Bedding Sealant: Butyl rubber type.

## 2.11 WALL LOUVERS

- A. Type: Fixed blades.
  
- B. Type: Operable blades, weatherstripped.
  - 1. Operation: Pull chain or crank as required by location.
  
- C. Material: 18 gage galvanized steel.
  
- D. Material:
  - 1. Frames and Flashings: Extruded aluminum, alloy 6063-T5, .062 inch thick.
  - 2. Blades: Extruded aluminum, alloy 6063-T6, .057 inch thick.

## ADDENDUM #1

- E. Fabrication: Configuration for self-framing and self-flashing. Minimum free area fully open shall be 63 percent (with screen).
- F. Finish: After fabrication, units shall be cleaned and chemically treated for corrosion resistance and good paint adhesion, and then receive manufacturer's standard two coat baked on paint finish.
- G. Insect Screen: 16-18 mesh aluminum screen cloth, removable.

### 2.12 FABRICATION

- A. Tolerances: Conform to tolerances set forth in MBMA Code of Standard Practice, except as follows:
  - 1. Alignment and fit-up of welded joints shall conform to the "Structural Welding Code - Steel" (AWS D1.1).

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verification of Conditions: Examine surfaces to receive the metal building for defects that will adversely affect the execution and quality of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.02 PREPARATION

- A. Protect factory applied finishes from damage during erection.
- B. Clean surfaces to receive the work of this Section.
- C. Isolation: Isolate aluminum in contact with cementitious materials and dissimilar metals, except compatible metals. Separate the materials by applying a heavy coat of bituminous paint or 10 mil self-adhesive polyethylene tape on the contact surfaces. Use gasketed fasteners where needed to eliminate the possibility of corrosive or electrolytic action between metals.

### 3.03 ERECTION AND INSTALLATION

- A. General: Erect and install the metal building and appurtenances in accordance with the manufacturer's printed instructions except as otherwise specified or required by the Reference Standards. Install the work of this Section so the structure is secure and weathertight, and exposed materials are free of visible dents, scratches, tool marks, cuts, and other imperfections. Install building systems free of rattles, wind whistles, and noise due to thermal movement.
- B. Framing Erection:
  - 1. Provide temporary bracing to securely hold members in proper position until permanent bracing is fastened in place.
  - 2. Erect primary and secondary structural members in their designed positions, and fasten each securely in place.

- a. Prepare, place, and cure shrink-resistant grout in accordance with grout manufacturer's printed instructions.
  3. Do not field cut or alter structural members without approval of the Director.
  4. After erection, touch-up welded and abraded surfaces, bare spots, and field bolts with shop primer paint.
    - a. For galvanized items, first repair galvanized coating with a 2 mil thick coating of cold galvanizing compound applied in accordance with compound manufacturer's instructions.
- C. Roofing System:
1. Assemble and anchor panels in place, in straight alignment, with provision for necessary thermal and structural movement. Locate panel end laps over supports. Lap panel ends minimum 6 inches. Fasten panels to each structural support.
  2. Seal longitudinal joints and transverse end laps.
    - a. Seal longitudinal joints with electrically operated seaming machine.
  3. Flash and seal roof covering at ridges, hips, rakes, eaves, and junctions with all related building components and accessories so that the roof is watertight.
- D. Roof Insulation: Install blanket insulation as panels are installed, with tight butt joints, and with vapor barrier toward building interior. Install insulation blocks, supports, and other accessories as required for a complete insulation system. Seal each joint in the vapor barrier with joint tape or adhesive.
- E. Wall System:
1. Assemble and anchor panels in place, aligned and plumb, with provision for necessary thermal and structural movement. Use panels of one-piece length from sill to roof line with no horizontal joints, except where panels are interrupted by auxiliary building components such as windows. Fasten panels to each structural support.
  2. Seal longitudinal joints with sealant.
  3. Flash and seal wall covering at sill, roof lines, and junctions with all related building components and accessories so that the walls are watertight.
- F. Wall Insulation: Install blanket insulation with tight butt joints, and with vapor barrier toward building interior. Install supports and other accessories as required for a complete insulation system. Seal each joint in the vapor barrier with joint tape or adhesive.
- G. Interior Liner Panels: Install liner panels after insulation installation has been inspected and approved. Place panels in straight alignment and fasten to each structural support. Install trim with close fitting joints.
- H. Related Building Components: Install related components in their designed locations, fitted with required accessories. Securely fasten items to structural supports. Adjust and lubricate operative units for smooth and easy operation. Seal components watertight at junctions with wall and roof systems.

## ADDENDUM #1

- I. Tolerances: Conform to tolerances set forth in MBMA Code of Standard Practice, except as follows:
  - 1. Alignment and fit-up of welded joints shall conform to the “Structural Welding Code - Steel” (AWS D1.1).

### **3.04 ADJUSTING**

- A. Restore minor visual damage to factory applied finishes in a manner to match the appearance and performance of the original finish, or remove the damaged parts and replace them with undamaged parts.

### **3.05 CLEANING**

- A. Remove strippable protective coatings after completion of work liable to damage the finish. Comply with manufacturer’s recommendations for coating removal.
- B. Clean exposed exterior and interior surfaces of exterior wall panels. Remove any residue from strippable coatings. Comply with panel manufacturer’s printed recommendations for cleaning.
  - 1. Also clean exposed surface of interior liner panels.

**END OF SECTION**



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**ENERGY CODE COMPLIANCE STATEMENT:**  
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CONTRACT: CONSTRUCTION

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LOCATION: ST. ALBANS VETERANS HOME 17850 LINDEN BOULEVARD JAMAICA, NY

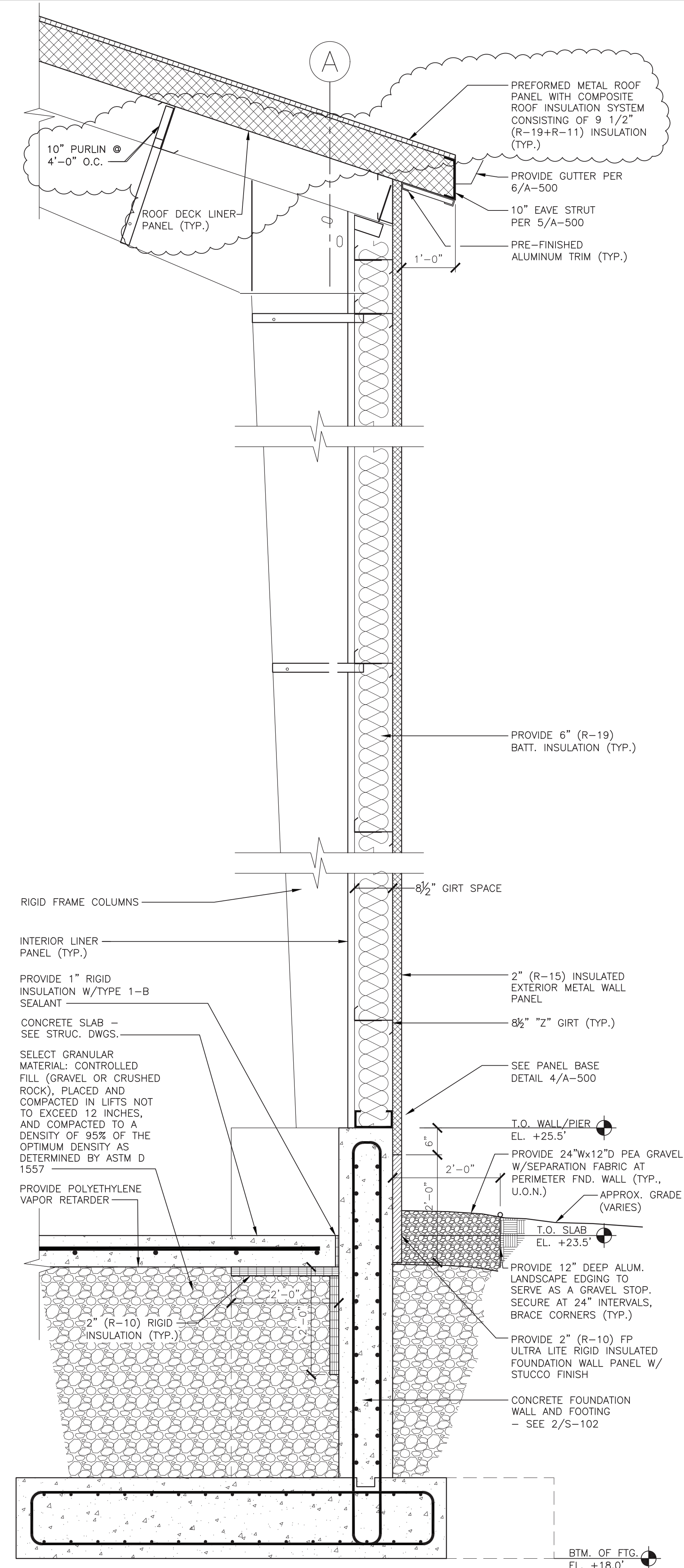
CLIENT: NEW YORK STATE DEPARTMENT OF HEALTH

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OSS PROJECT NUMBER:	47338-C	
DESIGNED BY:	FPM	
DRAWN BY:	FPM	
FIELD CHECK:		
APPROVED:	CMS	

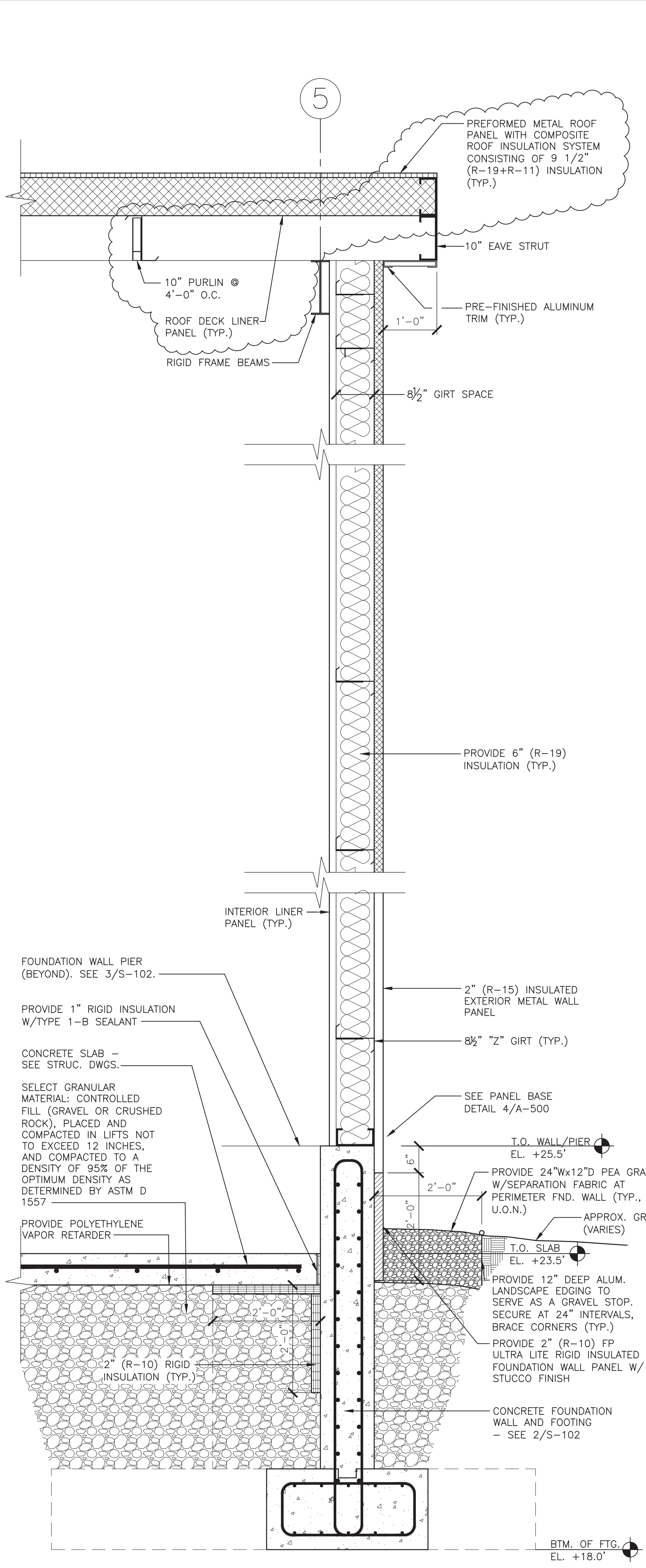
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WALL SECTIONS

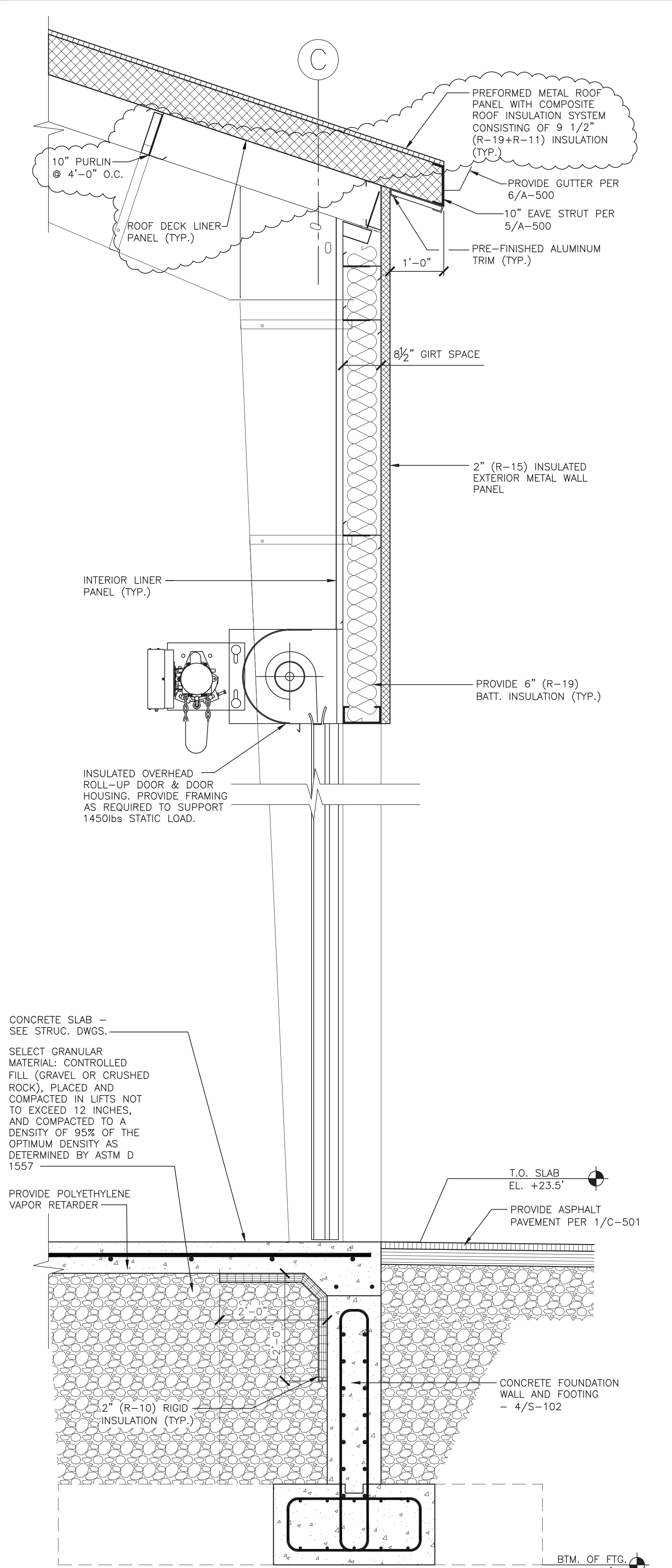
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**1 WALL SECTION**  
SCALE: 3/4" = 1'-0"



**2 WALL SECTION**  
SCALE: 3/4" = 1'-0"



**3 WALL SECTION**  
SCALE: 3/4" = 1'-0"

CONSULTANT  
FPM ENGINEERING & GEOLOGY, P.C.

CERTIFICATE OF AUTHORIZATION: #0019166

UNIFORM CODE COMPLIANCE STATEMENT:

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REGISTRATION EXPIRES: 10/31/2024

CONTRACT: CONSTRUCTION

TITLE: PROVIDE FACILITY STORAGE BUILDING  
ST. ALBANS VETERANS HOME

LOCATION:  
ST. ALBANS VETERANS HOME  
17850 LINDEN BOULEVARD  
JAMAICA, NY

CLIENT:  
NEW YORK STATE  
DEPARTMENT OF HEALTH

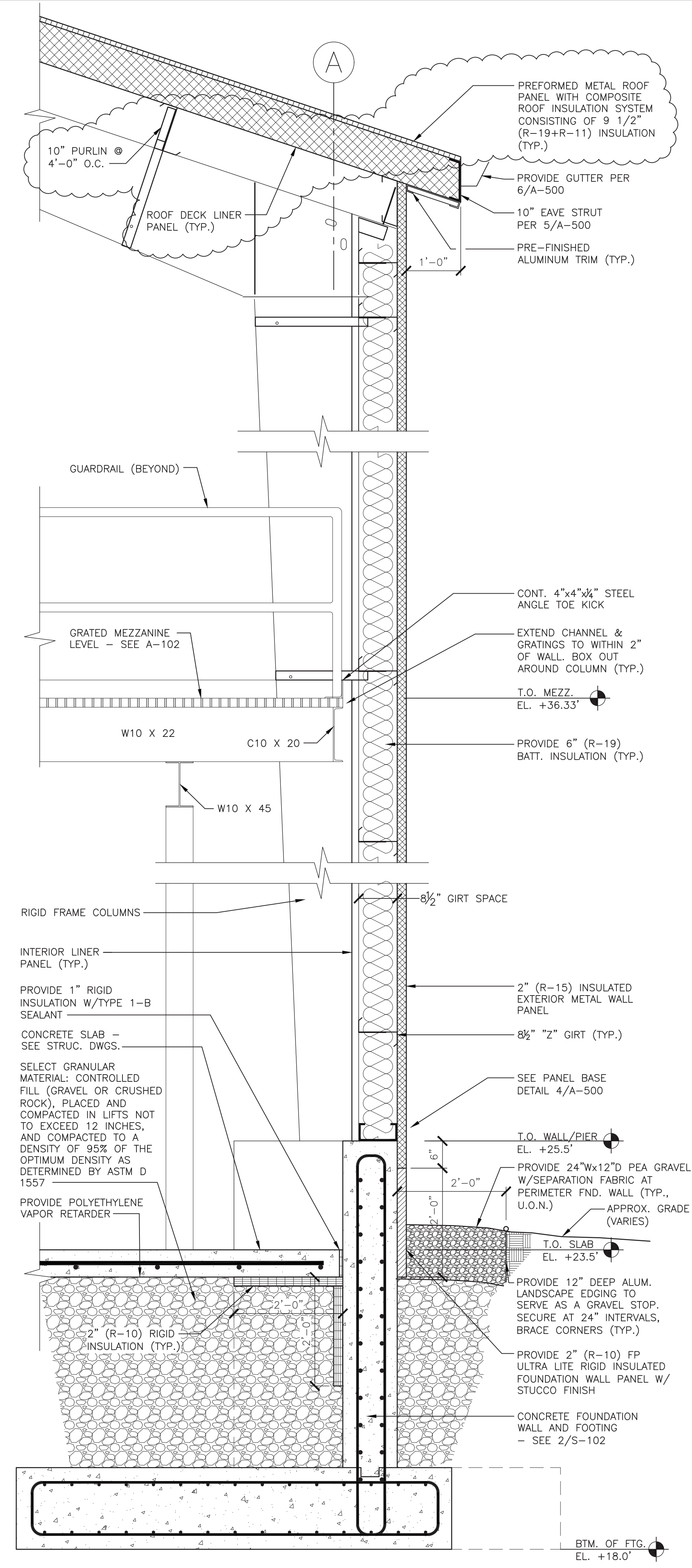
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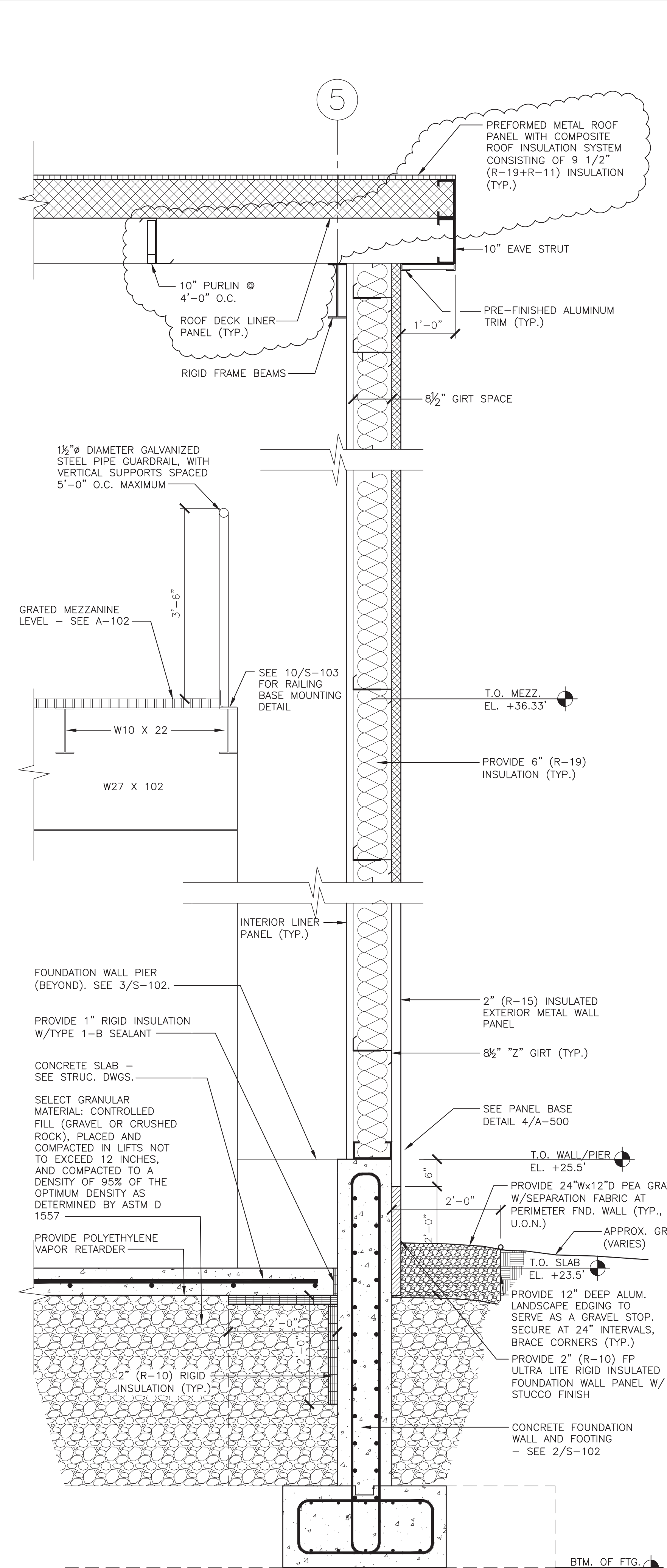
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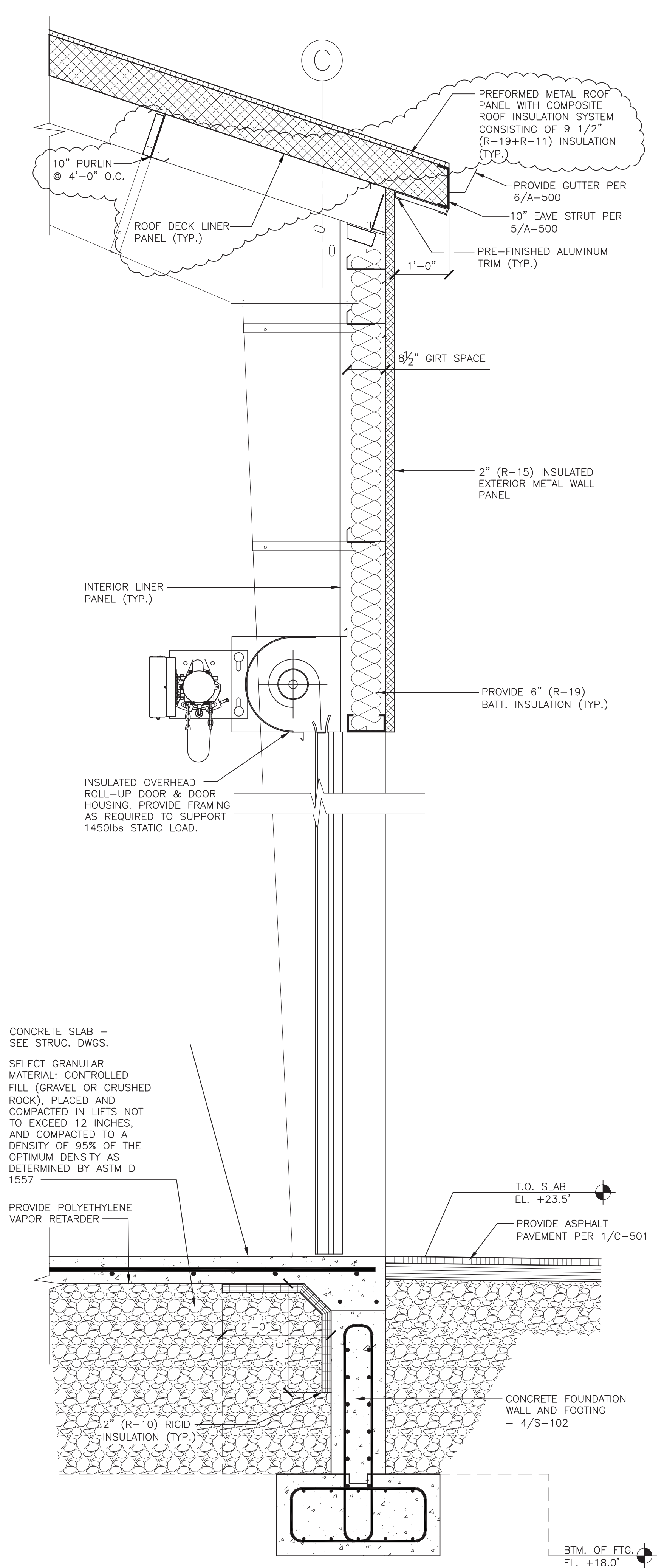
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A-400A



1 WALL SECTION  
SCALE: 3/4" = 1'-0"



2 WALL SECTION  
SCALE: 3/4" = 1'-0"



3 WALL SECTION  
SCALE: 3/4" = 1'-0"

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